

Amendments to the Claims:

Please amend the claims as indicated in the following listing of claims. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. – 39. (Canceled)
40. (New) A dual-sensing surface plasmon resonance sensor comprising:
 - (a) an optical fiber;
 - (b) a thin film suitable for surface plasmon resonance coated onto a surface of the optical fiber;
 - (c) a polymer disposed upon the thin film; and
 - (d) a fluorescent molecule associated with the polymer.
41. (New) The sensor of claim 40, wherein the optical fiber comprises a silica core.
42. (New) The sensor of claim 40, wherein the thin film comprises a metal.
43. (New) The sensor of claim 40, wherein the thin film comprises a semiconductor.
44. (New) The sensor of claim 43, wherein the metal comprises gold (Au).
45. (New) The sensor of claim 40, wherein the polymer is a monolayer covalently linked to the thin film.
46. (New) The sensor of claim 40, wherein the polymer comprises methacrylic acid and ethylene glycol dimethacrylate.
47. (New) The sensor of claim 40, wherein the polymer comprises styrene and divinylbenzene.

48. (New) The sensor of claim 40, wherein the fluorescent molecule comprises a lanthanide signal transducer.
49. (New) The sensor of claim 48, wherein the lanthanide signal transducer comprises europium(vinyl benzoate)_n.